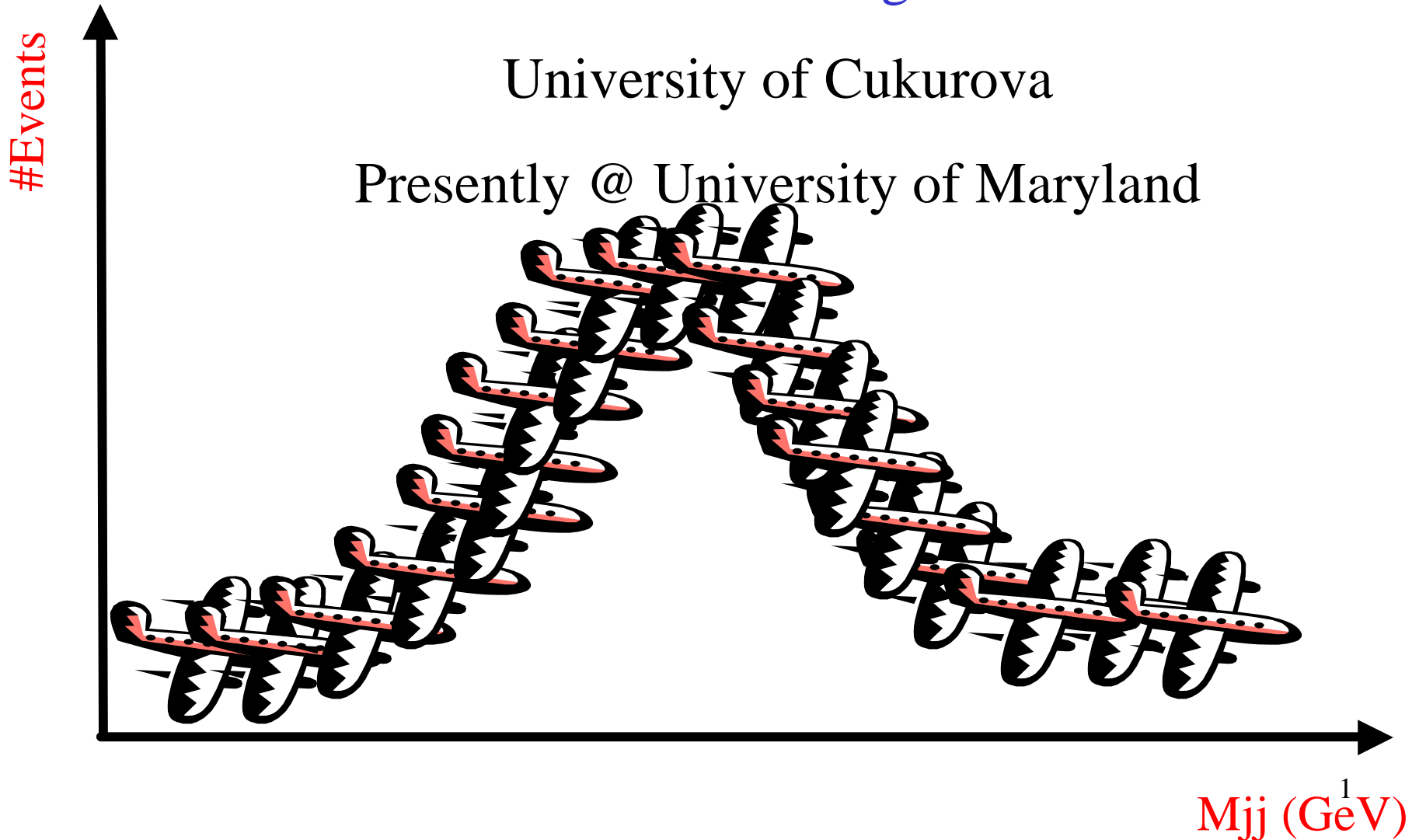


PRELIMINARY RESULTS FOR DIJET RESONANCES (UPDATE)

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CONTENTS

- Goals.
- What is Different from my previous results.
- Total cross sections in mass window.
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GOALS

- Try to improve previous results.
- Obtain trigger table for discovery of Z' .

WHAT IS DIFFERENT FROM MY PREVIOUS RESULTS

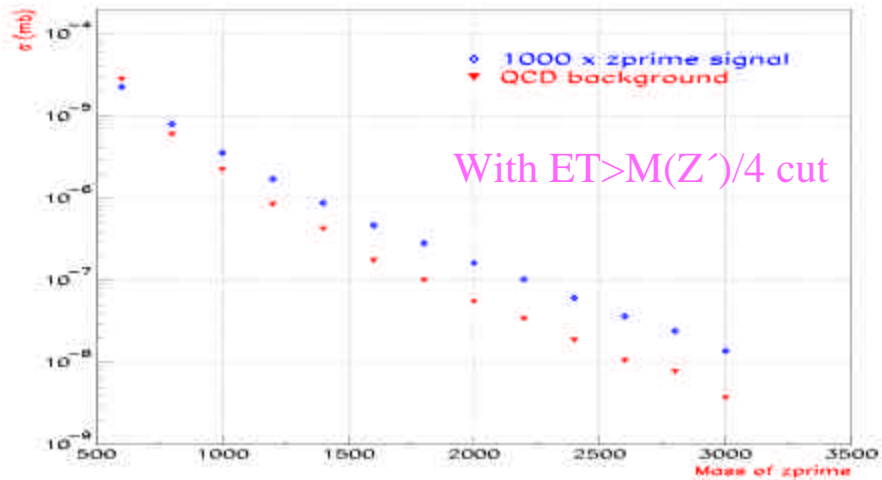
PREVIOUS

- Stable $E_T > 50$ cut for all Z' masses
- There were no $\text{Cos}\theta^*$ cut

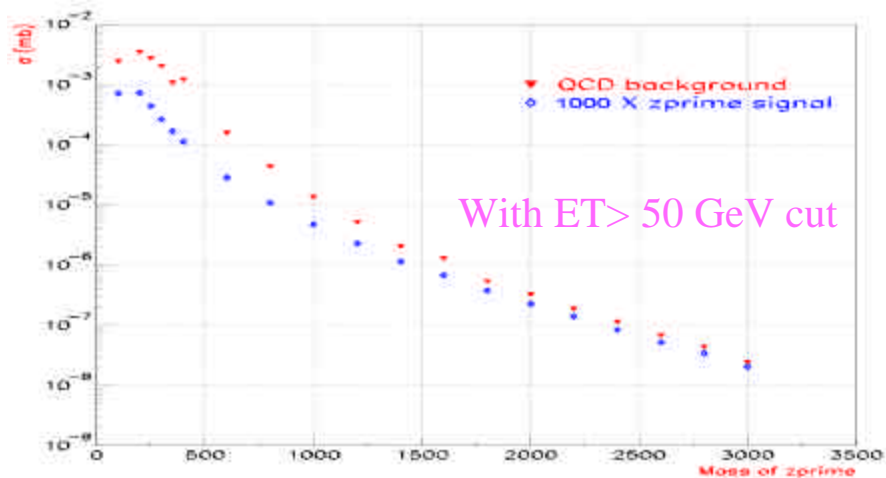
NOW

- Dynamic cut of $E_T > M(Z')/4$
- $\text{Cos}\theta^*$ cut

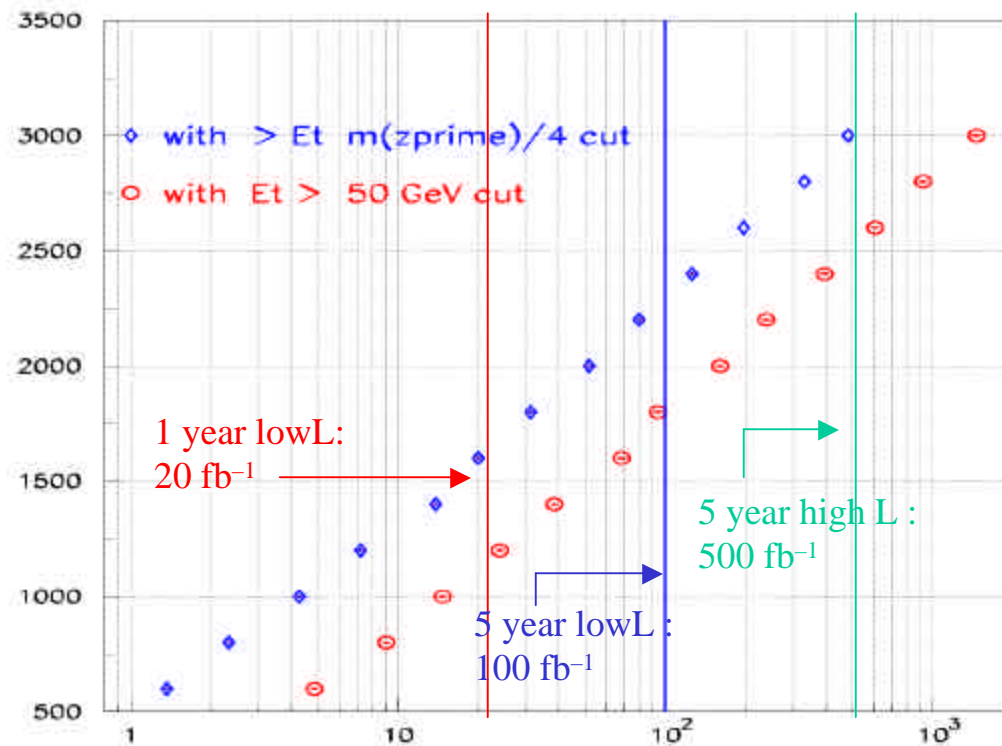
TOTAL CROSSSECTION IN MASS WINDOW



- signal crosssection/bgrdcrosssection is higher than previous case.



ESTIMATED LUMINOSITIES FOR 5σ DISCOVERY



- Luminosities are more optimistic than previous case.
- In first year Low luminosity run Z' can be discovered up to 1.6 TeV mass (with no prescale)
- Z' can be discovered up to 3.0 TeV in 5 years high L case.

TRIGGER TABLE

ET(GEV)	RATE (Hz)	PRESCALE	BANDWIDTH(Hz)	L (fb ⁻¹ /year)
150	800	100	8	0.02
250	80	16	5	1.25
400	8	2	4	10
550	1	1	1	20

M(Z')(TeV)	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3
L (fb ⁻¹)	1.4	2.3	4.3	7.3	14	20	31	52	80	126	197	332	482

Rates are taken from Bruno's single jet rates (I think Bruno has no Eta cut). With eta < 2.0 cut results could get more promising.

With this scenario we could discover Z' up to 1.6 TeV if it exist.

CONCLUSIONS&FUTURE PLANS

- New results more promising.
- Calculate the rates with $\eta < 2.0$ and $\cos\theta^*$.
- We plan to run again for different particles (W' , diquarks, etc.).
- We should investigate how NLO will effect this results.
- Check the result for full ORCA.